DOCUMENT RESUME

ED 391 934 CE 070 827

AUTHOR Bruhn, Rick A.; And Others
TITLE Vocational Career Study of High School At Risk Students.
PUB DATE 95
NOTE 14p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Achievement Tests; *Career Awareness; *Education Work Relationship; *English Instruction; *High Risk Students; High Schools; High School Students; Integrated Curriculum; *Outcomes of Education; Pretests Posttests; *Program Effectiveness; Scores
IDENTIFIERS Career Infusion; Texas

ABSTRACT

A study was made of the effect of career infusion on proficiency test scores in eight areas for seniors in a high school English class in Texas. The experimental group had not passed the proficiency tests and were considered at risk for dropping out of school. Two control groups were used: other at-risk senior English students and an 11th-grade English honors class. For approximately 3 months, career awareness activities were infused into the English curriculum for the experimental group. The group also visited community workplaces and then participated in 2-hour daily work at these workplaces. In addition, graduates in counseling worked with the students. The study found that the experimental group with career awareness training outperformed the at-risk control group on the posttest in five of the eight subtests. The experimental group with career awareness training outperformed the honors group on the posttest in three subtests and tied in one of the eight subtests. The experimental group experienced test score declines for four tests, possibly because the training did not address these subtest scales. Additionally, the experimental group generally outperformed the at-risk and honors control groups in subtest score improvements between pre- and posttesting. Partially as a result of the study, the high school moved to make career awareness training part of the English curriculum and hired a school-business coordinator. Recommendations were made to avoid testing at the end of the school year and to standardize the testing procedures. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 391 934

VOCATIONAL CAREER STUDY OF HIGH SCHOOL AT RISK STUDENTS

by

Rick A. Bruhn, Ed.D.

Jerry C. McGee, Ed.D.

Alfred V. Goodwin, Ph.D.

David L. Henderson, Ed.D.

Sam Houston State University

Huntsville, TX 77341

Summer, 1995

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

K Bruhn

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

CE 070827

DESCRIPTION OF THE "TREATMENT METHOD FOR THE CARS GRANT/RESEARCH

Drs. Goodwin, Bruhn, Henderson and McGee met with the Coordinator of Career and Technology Education of an Independent School District (one of the 100 largest districts in Texas) on March 2, 1994. The purpose was to develop plans for conducting a Community Based Organization Program funded by the Texas Education Agency, to be called the "Careers for At-Risk Students (CARS)" Project. This grant was designed to provide attitudinal and motivational prevocational training to "at-risk" and special populations included within senior english classes.

The target of the grant was a senior english class with students (16 years and older) who had not passed the English portion of the Texas Assessment of Academic Skills (TAAS) test, which is required by state law in order to graduate. This treatment group received training in employability and leadership skills. Mentor sites were established with local businesses to provide "hands-on" training, with students working as interns two hours per day. A liaison between students and businesses helped followed-up on the placements to facilitate the relationships between students and the businesses.

Business involved included banks, an Education Service Center, the Chamber of Commerce, the hospital, a state university, a furniture store, a car dealership, an automobile parts store, a florist, department stores, a grocery store, a beauty salon, a hardware store, a computer store, a printing shop, a child development center, and a drug store.

For approximately three months of instruction, the english class utilized career education infusion in the curriculum (Zunker, 1990), providing career awareness, on-the-job behavior training, and how to do interviews. The class visited the high school career center several times and took five field trips, including trips to a technical school, a state university, and a prison unit (the largest employer in the community).

The Career Development Inventory (CDI) (Super et al., 1979) was administered as a pre- and post-test to assess students on eight dimensions. Those dimensions included: Career Planning (CP); Career Exploration (CE); Career Decision-Making (DM); World-of-Work Information (WW); a combination of the CP and CE scores called Career Development Attitudes (CDA); a combination of DM and WW called Career Development Knowledge and Skills (CDK); a combination of the CP, CE, DM, and WW scores called Career Orientation Total (COT); and Knowledge of Preferred Occupation (PO). The description of each subtest as listed in the computerized score print-out was as follows:

Career Planning (CP): How involved you are in thinking about your future and making career plans.

Career Exploration (CE): How able you have been to find and utilize good sources of career planning information.

Career Decision-Making (DM): How able you are to solve problems involving vocational and educational choices.

World-of-Work Information (WW): How much you know about jobs and what it takes to find and succeed at one.

Career Development Attitudes (CDA): A combination of your CP and CE scores.
Career Development Knowledge and Skills (CDK): A combination of your CDM and WW scores.
Career Orientation Total (COT): A combination of your scores on the CP, CE, DM, and WW scales.
Knowledge of Preferred Occupation (PO): How much you know about occupations in the group to which your preferred occupation belongs. (Super et al., 1986, p. 1)

The pre-testing with the CDI started during the week of April 5. All three groups (experimental at-risk, control at-risk, and control honors) were tested. McGee and Henderson developed the research program to evaluate program effectiveness through the pre- and post-test statistical analysis of scores obtained on the CDI.

The Differential Aptitude Test Fifth Edition (DAT) (Psychological Corporation, 1991) was administered on Friday, April 15 to students in the experimental group. Several students missed this session and follow-up testing sessions for the DAT were scheduled for the following week. The DAT scores, along with the DAT Interest Inventory, provided aptitude and interest data for the students.

Dr. Bruhn organized counseling interns (nearing completion of the masters degree and counselor certification) to provide career testing and counseling for the students in the experimental group. The Counseling Interns were enrolled in, or had completed, Supervised Practicum (an advanced level course) and received "client contact hours" for conducting the counseling. Dr. Bruhn was responsible for coordination and supervision of the students.

Each student in the experimental group was assigned to an intern. Intern's volunteered to work with one to five students based on their time and availability.

The career testing and counseling was provided by the Interns starting the week of April 25. Each intern spent three periods (approximately one hour per period) with the students in the experimental group. During the counseling sessions, the counselors attempted to: 1) assess the goals of the individuals; 2) interpret aptitude and interest inventory scores (DAT and the interest inventory which accompanies the DAT); 3) help the student explore possible occupations and careers that were identified through the first two steps; 4) conduct another assessment regarding the student's needs, e.g., did the student need help in learning to write a resume, or develop effective interviewing skills; and, 5) address the needs identified in the preceding step.

Prior to meeting with the students, Interns met with the school district Career and Vocational Coordinator. The Coordinator introduced the Interns to the High school staff and informed the interns of procedures to be followed when in the

high school building. Interns counseled students from 8:15 am to 9:15 am at the High School during the english class.

The post-test administration of the CDI was administered in May within the last ten full days of school.

Indirect Effects From the Program: Four of the senior high english went to workshops to learn ways to infuse career materials and activities into the curriculum. Six months later, four additional english teachers received similar training. Thus, a number of english teachers are now infusing career materials into the high school curriculum. In addition, the school district added a new position for a school-to-work transition coordinator.

REFERENCES

Psychological Corporation. (1991). Differential aptitude tests: Fifth edition. San Antonio, TX: Harcort Brace Jovanovich.

Super, D., Thompson, A., Lindeman, R., Jordaan, J., and Myers, R. (1986). Career development inventory: School form (computerized scores report). Palo Alto, CA: Consulting Psychologists Press.

Super, D., Thompson, A., Lindeman, R., Jordaan, J., and Myers, R. (1970). Career development inventory (school form). Palo Alto, CA: Consulting Psychologists Press.

Zunker, Vernon G. (1990). Career counseling: Applied concepts of life planning (3rd ed.). Pacific Grove, CA: Brooks/Cole.

SUMMARY OF VOCATIONAL STUDY

Methods and Procedures

Question

Will career awareness training improve student scores on a Career Development Inventory (CDI)?

Sample

This sample included 15 students in 11th grade honors English, and 31 at risk 12th grade English students. All students were from Huntsville High School during the spring of 1994. All at risk students were also in the school's vocational program.

Purpose of the Study

The purpose of the study was to compare pre and post career awareness test scores for an experimental (treated) group with a control (untreated) group of at risk students. The honors students served as a 2nd control (untreated) group.

Treatment

Career awareness training for the experimental group conducted after the pretest was the treatment.

Test Administered

The Career Development Inventory (CDI) with eight (8) subtests standard score scales was administered. Testing occurred in February and May of 1994.

Test of Probability

A t-test was used with a probability of .05 or less being considered significant ($p<.05$). Frequency, mean, median, and standard deviation were also reported.

Research Design

R M_1------>T------->M_2 (experimental group)
R M_1---------->M_2 (control group)
R M_1---------->M_2 (honors control group)

Review of Data

1. When the experimental group was compared to the control group of at risk students before training, only the PO scale of the CDI was significantly different (p=.012).
2. When the experimental group was compared to the control group of at risk students after training, the CE scale (p=.035) and the CDA scale (p=.036) were both significantly different. The CP scale was p=.063.
3. When the control group mean scores for the first test were compared to themselves on the second test, the mean scores of the control group declined in all eight subtest areas. This decline in scores was significant in six of the eight subtest areas and almost significant (.074) in a seventh area (CE scale).
4. When the honors group mean scores for the first test were compared to the second test, the mean scores of the honors group improved in the CP, CE, and CDA scale scores and declined in five scale score areas.
5. When the experimental group was compared to the honors group, the experimental group outscored the honors group on the post (2nd) test on the CP, CE, and CDA scales. They tied the honors group on the CDK scale and were outscored by the honors group on the DM, WW, COT, and PO scales.
6. When the experimental group was compared to itself (pre and post test), the post test outscored the pretest on four subtests: CP, CE, CDA, and PO scales. Only on one subtest (WW) were the results statistically significant.

Findings

1. The experimental group with career awareness training out performed the control group on the post test in five of the eight subtests.
2. The experimental group with career awareness training out performed the honors group on the post test in three scales and tied in one of the eight subtests.
3. Subtests DM, WW, CDK, and COT experienced test score declines for the experimental group between the pre and post test. It is possible the training session (treatment) did not address these subtest scales.
4. The experimental group generally out performed the control and honors groups in subtest score improvements between pre and post testing.

5. Training for the experimental group directed itself to the subtests CE, CP, and CDA. All of the subtest scores exceeded the national mean scores and had probabilities of .035 (CE), .063 (CP), and .036 (CDA).
6. The honors group improved in three of the subtest scores (CP, CE, and CDA) between the pre and post testing. This suggests the honors group learned from the awareness gained on the first (pre) test.
7. The control group with no training experience subtest scores declined in all eight subtests. It is possible the test administrator did not motivate the students to apply themselves.

Question Answered

Based on the preponderance of evidence, career awareness training maintained and/or improved student test performance significantly better than the two untrained control groups.

Problems Observed

1. Control group scores dropped in all eight subtest areas. This may be explained by the events that influenced the test results during the second testing in May.
   A. A senior in the control group class was killed shortly before the second testing.
   B. Testing occurred in mid-May and the control group was not tested by the project administrators. The regular teacher gave the test because of confusion over the student's death.
2. Test scores on subtests DM, WW, CDK and COT dropped in all three groups between the first and second testing.
   A. It is possible training for the experimental group did not address these test areas. Test reliability may also be in need of review.
      (1) DM--Assesses ability to apply principles of career planning to situations.
      (2) WW--Assesses knowledge of career development tasks, occupational structure, sample occupations and techniques for getting and holding a job.
      (3) CDK--Assesses how to make career decisions and mores of work.
      (4) COT--Measures five dimensions in vocational and career maturity.

3. Three subtest scores on the posttest for all three groups were below the national norm (WW, CDK, and COT).
    A. Although these scores were below national mean score norms, they were within the standard error of measurement for each subtest score

Recommendation for future Training

1. Avoid end of the year testing (mid to late May).
2. Standardize test administration: 1st and 2nd testing, test administrators, instruction and the like.
3. Treatment intervention did not appear to address content measured in four subtest. Identify subtest training areas in future studies.

Tables

Tables for data entered and tests run are attached. They are summarized in Table I and Table II.

Table I: Career Development Inventory (CDI) t-test Values and Probabilities Significant for Three Groups: Experimental, Control, and Gifted. Huntsville High School (Texas), Spring 1994.

Groups (Pre and Post)	CP t value	sig	CE t value	sig	DM t value	sig	WW t value	sig	CDA t value	sig	CDK t value	sig	COT t value	sig	PO t value	sig
Control-1 Control-2	2.17	.039	1.86	.074	2.21	.036	5.38	.000	2.26	.032	3.83	.001	3.86	.001	.82	.422
Control-1 Exp-1	.62	.537	.06	.949	1.29	.208	.76	.456	.35	.732	1.23	.228	1.09	.284	2.68	.012
Control-2 Exp-2	1.95	.063	2.24	.035	.47	.644	.31	.756	2.22	.036	.11	.910	1.19	.245	1.18	.250
Exp-1 Exp-2	.59	.562	.73	.474	1.83	.078	3.43	.002	.72	.475	2.94	.007	1.15	.260	.39	.697
Honors-1 Honors-2	.34	.739	.39	.700	3.29	.003	3.24	.003	.44	.666	3.47	.002	1.88	.070	2.03	.052

Note: Significance is defined as $p < .05$.

Table II: Career Development Inventory (CDI) Mean Scores and Standard Deviations. Huntsville High School (Texas), Spring 1994.

Groups (Pre and Post)	CP M	CP SD	CE M	CE SD	DM M	DM SD	WW M	WW SD	CDA M	CDA SD	CDK M	CDK SD	COT M	COT SD	PO M	PO SD
Control-1	110	16.74	112	20.99	101	14.05	104	10.49	113	18.86	103	11.67	109	11.55	105	16.32
Control-2	94	21.82	97	20.36	85	22.93	77	16.13	95	22.45	80	20.35	83	23.85	99	15.94
Exp-1	107	12.27	111	17.35	94	15.91	101	8.75	111	13.83	98	11.72	105	12.35	90	14.25
Exp-2	110	20.43	117	24.58	81	20.81	80	23.07	116	25.28	95	28.25	79	22.00	92	14.42
Honors-1	106	19.60	104	17.54	118	10.33	117	8.21	105	19.28	120	8.19	116	14.96	120	15.45
Honors-2	108	24.60	106	21.62	98	20.90	92	29.28	109	21.72	95	26.30	102	24.30	109	13.12
National Norms	107	20.20	104	20.40	101	21.60	100	21.70	106	20.20	101	21.70	104	21.30	100	20.20
STD Error of Measure	6.8/6.7		9.3/9.8		11.1/13.0		7.5/8.4		11.9/11.8		7.5/8.1		7.0/8.1		7.2/8.2	

M= Mean Score
SD= Standard Deviation

Standard Error of Measurement: First Number=11th Graders
Second Number= for 12th Graders

BEST COPY AVAILABLE

For information on this study contact:

Dr. Rick Bruhn
Coordinator of Guidance
Department of Educational Leadership
and Counseling
P. O. Box 2119
Huntsville, Texas 77341
(409) 394-1147

or

Mrs. Carol Smith
Director Vocational/Technical Programs
Huntsville ISD
441 FM 2821 East
Huntsville, Texas 77340
(409) 295-3421